Specific principles applicable to FADN data on EC level - procedures in RICA 1

> 15. September 2016 TAIEX workshop, Belgrade

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FADN CZ

RICA-1 introduction

- RICA 1 is on-line application to transfer FADN data in harmonized format into EC database
- 24 hours accessible
- RICA 1 user access assigned by EC after confirmation
- Data in national currency
- Some tests use conversion in EURO
- System needs yearly upgrade of input information
- Including reference data
- Including coherence test
- Standard justification of some Coherence tests
- Does not contain homogeneity tests, continuity tests and other



RICA-1 functionality

Welcome to the RICA-1 Homepage

• Data files:

import export deleting testing

- More files for one country and year
- Merging data files
- Reference data export
- Tests results export
- Direct test results consulting
- Confirmation of data readiness

Data exchange

- Upload and import file
- Import file
- Full import for enhanced reporting
- Export file
- Download file
- Delete file
- Delete data from enhanced reporting
- Online exports
- File verification
 - <u>Consult file log</u>
 - Workflow
- Browse/Edit file
- <u>Start coherence tests</u>
- Consult coherence tests results
- <u>Consult typology results</u>
- Delegate file
- Yearly farm accounting data creation and verification
 - Merge data
 - Consult completeness
 - <u>Consult quality</u>
 - Confirm data ready
- Reference data
 - Country related data
 - Manage regions/subregions
 - Consult countries, regions, ...
 - Consult limits
 - <u>Annual selection plan</u>
 - <u>Conversion of types of farm</u>
 - Conversion of size classes
 - Common data
 - <u>Consult farm return definition</u>
 - Consult coherence tests definition
 - Consult typology definition
 - <u>Consult SGM calculation exceptions definition</u>
 - Consult SO calculation exceptions definition



RICA-1 work-flow scheme



Reference data

General codes – region, sub-region, holding, LAO, users e.g. 745.8200.1234, CZE, w0621175

Selection plan – approved by National Committee and Community Committee
Standard Output values – send by MS via NewCronos to Eurostat
Limits – approved by EC, delivered by LAO in standard format

Exchange rates (EC/Eurostat) Subsidies rates (EC) Coherence tests (EC)



Data import

Data are transmitted in: - FADN EU harmonized format

- in national currency
- for the current accounting year

Transmitted file can contain data of more holdings:

- grouping by subregion, legal form, users etc.

Data are transmitted in XML (Extensible Markup Language) format

XML – used for data exchange, defines structure of document (tags, attributes) Rica-1 enables also export of data



XML file format

- Follow XML template (.xsd) for RICA-1 purposes can be downloaded from CIRCABC
- Structure of XML can be changed recommended to monitor news on CIRCA
- Incorrect upload is detected by error message
- Error message in general form time consuming to find row with problem
- To create XML file: own programming
 - use of the purchased SW (e.g. ALTOVA.com)
 - conversion supported by your database tool (TransactSQL, SQL2XML...)

To check XML format – use SW to check that the file corresponds to XSD definition



XML structure example

```
<?xml version="1.0" encoding="UTF-8"?>
                                                                            - <t |="]">
- <fc xsi:noNamespaceSchemaLocation="importxml.xsd"</p>
                                                                                - < arp n="AN">
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
                                                                                    - <cat n="100">
     <v>20131120</v>
                                                                                        - <col n="A">
   - <f n="9999.9999.9999">
                                                                                              <col value>99999</col value>
       - <t |="A">
                                                                                          </col>
          - < arp n="AI">
              - <cat n="50">
                                                                                      </cat>
                  - <col n="AO">
                                                                                    - <cat n="210">
                       <col_value>9999</col_value>
                                                                                        - <col n="A">
                    </col>
                                                                                              <col value>99999</col value>
                </cat>
                                                                                          </col>
              - <cat n="60">
                                                                      Table J
                                                                                      </cat>
                  - <col n="C">
                                                      Table A
                       <col value>1</col value>
                    </col>
                </cat>
                                                                      Table M
                                                                                       - <cat n="5900" fi="2" bu="1">
              - <cat n="70">
                                                                                          - <col n="N">
                  - <col n="DT">
                                                                                               <col value>99999</col value>
                       <col value>31-DEC-2015</col value>
                                                                                            </col>
                                                                                          - <col n="V">
                    </col>
                </cat>
                                                                                               <col value>99999</col value>
            </grp>
                                                                                            </col>
                                                                                         </cat>
          - <arp n="CL">
                                                                                       - <cat n="9000" fi="1" bu="1">
              - <cat n="100">
                                                                                          - <col n="N">
                  - <col n="C">
                                                                                               <col value>99999</col value>
                       <col value>1</col value>
                                                                                            </col>
                    </col>
                                                                                          - <col n="V">
                </cat>
                                                                                               <col_value>99999</col_value>
              - <cat n="110">
                                                                                            </col>
                  - <col n="C">
                                                                          </c
</grp>
</t>
</f>
</f>
                                                                                         </cat>
                       <col value>1</col value>
                    </col>
                </cat>
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```

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FADNCZ

XML file upload & import

File		Search	Detect file type
Compression	None 🗸		

File format	Field structure	Record structure
	O Fixed width, length	
◯ Text	● Standard delimiter Tab 🗸	Record delimiter CR 🗸 🗸
	O Custom delimiter	
O Binary	Byte ordering Big-Endian, MSB left (32 bits, 1 word) 🗸 🗸	Fields per record
● XML		
🔾 Xml New		

Accounting year	2015	
Description		

Automatic full import for enhanced report	O Full import for enhanced reporting		
Automatic full import for enhanced reporting	No import for enhanced reporting		

	Test all holdings	
Automatic coherence checking	\bigcirc Test only the following number of holdings per region	10





Data verification workflow



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Coherence tests

Approximately

36 test series include about **482** tests (current version of Coherence tests definition - 20150220/3)

Test level:

Initial, Critical, Typology – errors to be removed Severe – data should be corrected, in special cases can be justified by EC Anomaly – what is not error can be justified Warning – what is not error can be justified

Tests are designed to cover all MS:

- some cases that test does not fit can occur and can be explained for Anomaly and Warning tests
- more precise justification inserted, the less additional questions ask

Consult coherence tests

Session details			Test results					
Time anded	Version of tests	Teete	Lovel	Custom orrors	Failed		Success	
Time ended	version of tests	Tests	Level	system errors	Non justified	Justified	Total	Success
		505304	INITIAL					
			CRITICAL		<u>2</u>		2	337572
00.09.2016.12.16.10			TYPOLOGY					851
09.08.2016 12:16:10	2		SEVERE		<u>872</u>		872	73410
			ANOMALY <u>861</u>		861	62550		
			WARNING		<u>905</u>		905	28281
Total				<u>2640</u>		2640	502664	

Coherence tests series – list 1

Numbe	r		
of	Description	Tables	
Series			
1	COHERENCE OF TABLE A (GENERAL INFORMATION OF THE HOLDING)	А	
2	COHERENCE BETWEEN TABLE B (TYPE OF OCCUPATION) AND TABLES D (ASSETS), I (CROPS) AND		
	H(INPUTS) AND PLAUSIBILITY OF RENT PAID (TABLES B AND H)	חועם	
3	COHERENCE OF TABLE C (LABOUR)	С	
4	PLAUSIBILITY OF THE ANNUAL TIME WORKED, TABLE C (LABOUR)	С	
5	PLAUSIBILITY OF WAGES PAID (TABLES C AND H)	СН	
6	COHERENCE OF TABLE D (ASSETS)	D	
7	COHERENCE BETWEEN TABLE D (ASSETS) AND TABLES I (CROPS), J (LIVESTOCK PRODUCTION) AND F		
	(DEBTS)	DIIO	
8	COHERENCE OF TABLE E (QUOTAS AND OTHER RIGHTS) AND TABLES D (ASSETS), H (INPUTS) AND J	DEHLI	
	(LIVESTOCK PRODUCTION)	DEIIIO	
10	COHERENCE OF TABLE G (VALUE ADDED TAX)	G	
11	COHERENCE BETWEEN INTERESTS PAID AND DEBTS IN TABLES H (INPUTS) AND F (DEBTS)	FH	
10	PLAUSIBILITY OF SPECIFIC CROP COSTS IN TABLE H (INPUTS) AND COHERENCE OF INPUTS WITH TABLE	вно	
12	D (ASSETS)	BHB	
13	CODIFICATION OF TABLE I (CROPS), K (ANIMAL PRODUCTS) AND L (OGA)	IKL	
14	PLAUSIBILITY OF TABLE I (CROPS) OUTPUT PER HECTARE	I	
15	PLAUSIBILITY OF THE TOTAL OUTPUT, OUTPUT OF BYPRODUCTS IN TABLE I (CROPS)	I	
16	COHERENCE OF TABLE I (CROPS) AMONG PRODUCT CATEGORIES	I	
17	PLAUSIBILITY OF THE PHYSICAL PRODUCTION OF TABLE I (CROPS), TABLE K (ANIMAL PRODUCTS AND		
17	SERVICES) AND TABLE L (OGA)		
10	PLAUSIBILITY OF THE OUTPUT VALUE (PRICE/TONNE) OF TABLE I (CROPS), TABLE K (ANIMAL PRODUCTS		
18	AND SERVICES) AND TABLE L (OGA)		

Coherence tests series – list 2

Numbe	r	
of	Description	Tables
Series		
19	COHERENCE OF TABLE L (OGA)	L
20	COHERENCE OF TABLE J (LIVESTOCK PRODUCTION): VALUES	J
21	COHERENCE OF TABLE J (LIVESTOCK PRODUCTION): AVERAGE NUMBER	J
22	COHERENCE BETWEEN LIVESTOCK, LIVESTOCK PRODUCTS AND OGA (TABLES J, K AND L)	JKL
23	PLAUSIBILITY OF THE UNIT VALUES PER HEAD OF LIVESTOCK, TABLE J (LIVESTOCK PRODUCTION)	J
24	COHERENCE OF DETAILS OF PURCHASES AND SALES IN TABLE J (LIVESTOCK PRODUCTION)	J
25	PLAUSIBILITY OF UNIT VALUE OF SALES AND PURCHASES IN TABLE J (LIVESTOCK PRODUCTION)	J
26	COHERENCE BETWEEN THE CHANGES IN THE NUMBER OF LIVESTOCK IN TABLE J (LIVESTOCK	.1
20	PRODUCTION)	<u> </u>
27	COHERENCE BETWEEN THE AVERAGE NUMBER OF ANIMALS IN TABLE J (LIVESTOCK PRODUCTION) AND	J
	ANIMALS UNDER CONTRACT IN TABLE K (ANIMAL PRODUCTS AND SERVICES)	
28	PLAUSIBILITY OF THE AVERAGE NUMBER OF ANIMALS IN TABLE J (LIVESTOCK PRODUCTION)	J
29	COHERENCE BETWEEN INPUTS (TABLE H) AND PRODUCTION ACTIVITIES IN TABLES J (LIVESTOCK	ы
	PRODUCTION), K (ANIMAL PRODUCTS) AND L (OGA)	
30	PLAUSIBILITY OF FEEDSTUFF COSTS IN TABLES H (INPUTS) AND J (LIVESTOCK PRODUCTION)	HIJL
40	COHERENCE OF TABLE M (SUBSIDIES)	М
41	COHERENCE BETWEEN TABLES M (SUBSIDIES), A (GENERAL INFORMATION) AND B (TYPE OF	ARM
	OCCUPATION)	
43	COHERENCE BETWEEN TABLES M (SUBSIDIES) AND J (LIVESTOCK PRODUCTION)	JM
44	COHERENCE BETWEEN TABLES M (SUBSIDIES) AND D (ASSETS)	DM
45	COHERENCE BETWEEN TABLES M (SUBSIDIES) AND H (INPUTS)	НМ
46	COHERENCE BETWEEN TABLES M (SUBSIDIES) AND I (CROPS)	IM
888	BASIC AND GENERAL TESTS	

Coherence test description

Test 1.62 (Anomaly) If the holding applies organic production method for vineyards, there should be production of wine or other products from vines on the farm

```
If
(LOOP_CL_C = 35)
Then
(FRAggregate(I_PR_40411:40480_Q;) > 0)
Else
True
```

Series 17 *PLAUSIBILITY OF THE PHYSICAL PRODUCTION OF TABLE I (CROPS), TABLE K (ANIMAL PRODUCTS AND SERVICES) AND TABLE L (OGA)*

Test 17.1 (Warning) Physical production (kg/ha) of field crops and permanent crops should not be below given limits. Test runs for areas bigger than 1 ha

lf

```
((LOOP_PR_Q > 0) And (LOOP_A_TA > MINIMALAREA))
```

Then

```
Limit(ignored,false,na,yes;Key(year=ACCOUNTING_YEAR),Key(id_lao=LIAISON_AGENCY_OFFIC E),Key(limit=176),Key(key1=LOOP_CAT);((LOOP_PR_Q / LOOP_A_TA) * 10000))
Else
```

True

<u>**Test 6.11 (Anomaly)**</u> Table D: Inventories should be filled in $((D_OV_1040_V + D_CV_1040_V) > 0)$



Homogeneity data verification

Aim of homogeneity control:

- to provide comprehensive view on the farms
- to detect unusual behaviour of the farm
- to identify very low and very high values (income, labour, costs, output)
- to supervise relations between certain variables

Is not part of RICA-1 Is processed by FADN EU unit after data delivery Results in EURO Results of individual holdings



Homogeneity examples

negative livestock output

(=sales+household consumption-purchase+closing valuation-opening valuation)

- negative crop output (linked to coherence tests justification)
- negative Farm Net Value Added
- low or very high amount of Farm Net Value Added/AWU
- low labour (AWU) without contract work for farms with high number of hectares or animals or intensive farming (vegetable, flowers)
- specific crop costs/ha in relation to crop output/ha
- specific livestock costs/Livestock unit in relation to livestock output/LU
- farms with high impact on aggregated country/type of farming results for income indicators
- quantity of fertilisers used in relation to production
- etc.

Continuity data verification

Aim of continuity control:

- to detect suspicious year-on-year changes
- to discover missing/surplus values
- to identify systematic errors

Continuity over time of:

- aggregated/weighted results
- individual results

Is not part of RICA-1 Is processed by FADN EU unit after data delivery Results in EURO



Continuity of Standard Results

Continuity over time of aggregated results

<u>Weighted average results per group (e.g. whole country, type of farming)</u> compared to results of previous one or two years

To detect significant change of weighted aggregated results:

- prepare list of standard results per 3 last years
- verify high differences (%)

Shall be aware of:

- small value create high nonessential difference (check absolute value)
- high change of farms in the group may influence results
- small number of farm in group has also higher probability of significant change

Continuity examples

Continuity over time of individual results:

- in labour without change in costs and income
- in labour without change in farm structure (ha, LU)
- in specific crop costs (seeds, crop protection, fertiliser)/ha without change of crop structure
- in specific livestock costs (feeds, veterinary costs)/LU without change of livestock structure
- in output/costs (intermediate consumption) share
- in cost of electricity, fuels, rent paid, insurance etc.



Subsidies

Subsidies

- Comparison of weighted sums of subsidies over years
- Check of good registration
- Missing or surplus values
- Correctness of totals
- Results by codes from table M



Structure

Agriculture structure

- comparison of weighted results to Farm Structure Survey

General structure	Animals (livestock units)	Crops (hectares)
Number of holdings	Equines	Cereals (including rice)
SO value	Cattle	Dry pulses
UAA in ha	Sheep	Potatoes
Livestock units	Goats	Sugar beet
Labour input in AWU	Pigs	Industrial plants
	Poultry	Vegetables and flowers
		Forage (including grass)
		Other arable crops
		Seeds and seedlings
		Fruits and other permanent crops
		Olive groves
		Vineyards

Thank you for your attention



